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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,280	06/15/2006	Yundong Wang	4662140	5147
23117 7590 01/22/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER LEE, RIP A	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 01/22/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,280	<b>Applicant(s)</b> WANG ET AL.	
	<b>Examiner</b> Rip A. Lee	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>01-30-2006</u> | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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4. Claims 1-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ouhadi (EP 757 077).

Ouhadi teaches a composition comprising 38.85 wt % of V 3666 EPDM (contains 42.9 % extender oil and 57.1 % elastomer, or, in terms of overall composition, 16.67 wt % oil and 22.18 wt % EPDM), 7.77 wt % of RP 210 polypropylene resin, and 30.4 wt % of Flexon 876 processing oil; see page 9, Table 3, entry 6. The total amount of oil is 46.71 wt %, and the ratio of oil to elastomer is  $46.71/22.18 = 2.1$ . The composition further contains 7.40 wt % of SBR 1500 styrene-butadiene rubber. Cure is achieved with 1.40 wt % of phenolic resin 9, with the final composition exhibiting a Shore A hardness of 41 and good surface aspect.

The reference is silent with respect to the specific properties recited in instant claims 1-6, 9, and 10, however, in light of the fact that the composition is substantially the same as that described in the instant claims, a reasonable basis exists to believe that the composition of Ouhadi exhibits substantially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Regarding claim 8, while Ouhadi does not disclose the level of cure, it is reasonable to believe that cure of at least 98 % is achieved, as reflected in the Shore A hardness of the polymer composition. One acknowledges that Ouhadi indicates that ideally, the compositions of the invention are preferably fully cured, however, Ouhadi also contemplates partial curing. Furthermore, the examiner believes the difference between Ouhadi's recited "fully cured" and the claimed cure level of 98 % are within experimental error, and one would expect little difference in properties. Again, the burden of proof is shifted to Applicant to establish any unobviousness differences.

5. Claims 1-11 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dozeman *et al.* (U.S. 6,750,292).

Dozeman *et al.* discloses a thermoplastic vulcanizate containing 5-70 parts by weight of semi-crystalline polyolefin, 30-95 pw of an at least partially vulcanized polymer, and an oil (claim 1). The polyolefin is polypropylene (col. 2, line 11), and the rubber is an EPDM (col. 2,

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line 21). The ratio of oil to rubber is between 0.7 and 2.0 (col. 2, line 50). Compositions are at least 95% vulcanized (col. 3, line 11). A phenolic resin is used as vulcanizing agent (col. 3, line 21). The reference is silent with respect to the specific properties recited in instant claims 1-6 and 9-10, however, in light of the fact that the composition is substantially the same as that described in the instant claims, a reasonable basis exists to believe that the composition of Dozeman *et al.* exhibits substantially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

6. Claims 1 and 13 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Dozeman *et al.* in view of Ouhadi.

While Dozeman *et al.* does not teach an appropriate amount of phenolic resin to carry out vulcanization, one having ordinary skill in the art would have found it obvious to use about 1.40 wt %, which is the working amount shown in the examples of Ouhadi. Since this amount is taught in the prior art as a practical amount for performing vulcanization, one having ordinary skill in the art would have expected the combination of teachings to work with a reasonable expectation of success.

7. Claims 1-11 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hamanka *et al.* (U.S. 5,187,224).

Hamanka *et al.* teaches a blend comprising a partially crosslinked product of a mixture of an oil-extended olefinic copolymer rubber (an EPDM), a polyolefin resin (a polypropylene), a hydrogenated block copolymer, and mineral oil, wherein the composition exhibits a Shore A hardness of less than 45 (abstract). Specifically, compositions of Hamanka *et al.* contain (a) 100 parts by weight (pw) of hydrogenated block copolymer, (b) 5-400 pw of oil extended rubber comprised of 100 pw of rubber and 20-150 pw of mineral oil, (c) 2-100 pw of polyolefin, and (d) 50-350 pw of mineral oil; see claim 1. Antistatic agents can be included to reduce tackiness (col. 6, lines 5-9). The reference is silent with respect to the specific properties recited in instant claims 1-6, 9, and 10, however, in light of the fact that the composition is substantially the same

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as that described in the instant claims, a reasonable basis exists to believe that the composition of Hamanka *et al.* exhibits substantially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). While the reference does not quantify the level of partial crosslinking, one of ordinary skill in the art, in view of the Shore A values exhibited by polymers in Hamanka *et al.*, would reasonably believe that the polymers of the prior art are crosslinked to the extent recited in instant claim 8. Again the burden of proof is shifted to Applicant to establish any unobviousness differences.

### ***Claim Objections***

8. Claim 11 is objected to because of the following informalities: Please insert "composition" after the word "elastomer." Appropriate correction is required.

### ***Double Patenting***

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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10. Claims 1-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 14, 17, 18, 21-25 of copending Application No. 10/501,902. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

Claims of the instant invention are drawn to a composition comprising thermoplastic polyolefin (less than 10 wt %), dynamically vulcanized elastomer, wherein the oil/elastomer ratio is at least 2/1. Claims of the copending application are drawn to a partially vulcanized composition comprising 30-95 pw of elastomer, 5-50 pw of thermoplastic polymer, 0-70 pw of oil, and 0.1-10 pw of a curing agent such that the sum of all components is 100 pw. A composition containing 30 pw elastomer, 5 pw of thermoplastic polymer, 60 pw of oil, and 5 pw of curing agent is substantially the same as the composition set forth in the instant claims. The claims of the copending application do not recite the properties described in the instant claims, however, in view of the fact that the compositions are substantially the same, it is reasonable to expect that they exhibit substantially the same properties.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu S. Jagannathan, can be reached at (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



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January 15, 2008